

U.S. Patent Application Serial No. 10/079,401  
Amendment dated April 6, 2004  
Reply to OA of December 23, 2003

**REMARKS**

Claims 1-10 are currently being examined, of which claims 1, 4, and 6 have been amended. No new claims have been added. It is respectfully believed that no new matter has been added.

Before turning to the cited art, a brief review of the present invention is in order. The present invention relates to a reference waveform that shows “changes in load at regular time intervals when the first terminal is crimped normally” (see claims 1, 4, and 6, as amended).

Furthermore, the present invention relates to a method for testing the crimped state of a test terminal on the basis of a waveform of characteristic values obtained in the process of crimping the test terminal on a core of an electric wire, comprising the steps of: acquiring a reference waveform from a characteristic waveform when a first terminal has been crimped normally, and dividing the reference waveform into first plural reference waveform segments, the reference waveform showing changes in load at regular time intervals when the first terminal is crimped normally, each of the first plural reference waveform segments corresponding to a segment of time elapsed when the first terminal is crimped normally; dividing the waveform obtained when the test terminal is crimped on the electric wire into second plural waveform segments corresponding to those of the reference waveform; and deciding whether or not the crimped state of the test terminal is good on the basis of the first reference waveform segments of

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the reference waveform and the second waveform segments of the waveform obtained when the test terminal is crimped.

Claims 1, 2, and 4-10 stand rejected under 35 USC 102(b) as anticipated by USP 5,937,505 (**Strong '505**).

Applicants respectfully traverse this rejection.

**Strong '505** discloses a method of evaluating a crimped electrical connection relating to ram displacement and force. The reference describes a “data base containing upper and lower force values for a set of predetermined distances so as to define a band (envelope) of force measurements within which lie the force measurements of an acceptable crimp” (col. 2, lines 16-20). Ram displacement and force are shown in FIGS. 3 and 4 of the reference.

The Examiner has suggested that claims 1, 2, and 4-10 are anticipated by **Strong '505** because the ram displacement is directly related to the time that has elapsed during the crimping process.

However, claim 1, as amended, sets forth a “reference waveform showing changes in load at regular time intervals when the first terminal is crimped normally”. **Strong '505** does not

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describe, teach, or suggest the reference waveform set forth in claim 1, as amended, in combination with the other claimed features.

FIGS. 3 and 4 of **Strong ‘505** relate to a relationship between ram displacement and force, and do not describe, teach, or suggest a reference waveform showing changes in load at regular time intervals when a terminal is crimped normally as set forth in claim 1, as amended. Those drawings show changes in ram displacement and load. FIGS. 3 and 4 do not include an axis labeled “time”. Those drawings do not claim to show a specific rate of time that is elapsing.

**Strong ‘505** collects data at particular time intervals (FIG. 5, step 82) and then “the measured data is interpolated to the set of predetermined distances” (col. 5, lines 45-47). Even though data may be acquired at particular time intervals, the FIGS. 3 and 4 are not described as showing a specific rate of time elapsing.

The data depicted in FIGS. 3 and 4 may represent time stretching and/or time compression, in order to create satisfactory curves showing displacement vs. force. That is, the data depicted in FIGS. 3 and 4 may represent time stretching and/or time compression, wherein the most important aspect is the relationship between displacement and force.

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“FIG. 3 shows a graph 60 which depicts the relationship of crimp force on the terminal 20 with respect to displacement of the ram 14” (col. 4, lines 41-43). FIGS. 3 and 4 do not include an axis labeled “time”. Furthermore, FIGS. 3 and 4 are not described as showing “real time” relationships. Therefore, the reference does not describe, teach, or suggest a waveform showing changes in load at regular time intervals when a terminal is crimped, as set forth in claim 1, as amended, in combination with the other claimed features.

Claims 1, 4, and 6, as amended, each set forth a “reference waveform showing changes in load at regular time intervals when the first terminal is crimped normally”, in combination with other claimed features.

In view of the foregoing, **Strong ‘505** fails to describe, teach, or suggest a “reference waveform showing changes in load at regular time intervals when the first terminal is crimped normally” as set forth in claims 1, 4, and 6, as amended, in combination with the other claimed features.

Thus, Applicants respectfully submit that this rejection should be withdrawn.

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Claims 1 and 3 stand rejected under 35 USC 102(b) as anticipated by USP 5,197,186  
**(Strong '186).**

Applicants respectfully traverse this rejection.

**Strong '186** discloses a method of evaluating a crimped electrical connection. The method utilizes data pairs showing a relationship between force applied and an amount of deformation of a terminal, during a crimp operation (col. 2, lines 60-63).

The Examiner has suggested that claims 1 and 3 are anticipated by **Strong '186** because the displacement is directly related to the time that has elapsed during the crimping process.

However, claim 1, as amended, sets forth a “reference waveform showing changes in load at regular time intervals when the first terminal is crimped normally”. **Strong '186** does not describe, teach, or suggest the reference waveform set forth in claim 1, as amended, in combination with the other claimed features.

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FIGS. 3 and 4 of **Strong '186** relate to a relationship between ram displacement and force, and do not describe, teach, or suggest a reference waveform showing changes in load at regular time intervals when a terminal is crimped normally as set forth in claim 1, as amended. Those drawings show changes in ram displacement and load. FIGS. 3 and 4 do not include an axis labeled "time" and do not indicate that "real time" relationships are depicted therein. Those drawings do not claim to show a specific rate of time that is elapsing. The data depicted in FIGS. 3 and 4 may represent time stretching and/or time compression, in order to create satisfactory work curves, wherein the most important aspect is the relationship between displacement and force.

**Strong '186** fails to describe, teach, or suggest the claimed invention for reasons similar to the above-explained reasons showing why **Strong '505** fails to describe, teach, or suggest the claimed invention.

In view of the foregoing, **Strong '186** fails to describe, teach, or suggest a "reference waveform showing changes in load at regular time intervals when the first terminal is crimped normally" as set forth in claim 1, as amended, in combination with the other claimed features.

Thus, Applicants respectfully submit that this rejection should be withdrawn.

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In view of the aforementioned remarks and amendments, it is respectfully submitted that all pending claims are in condition for allowance, which action, at an early date, is requested.

If, for any reason, it is felt that this application is not now in condition for allowance, the Examiner is requested to contact Applicants' undersigned attorney at the telephone number indicated below to arrange for a telephone conference to expedite the disposition of this case.

In the event that this paper is not timely filed, Applicants respectfully petition for an appropriate extension of time. Please charge any fees for such an extension of time and any other fees which may be due with respect to this paper, to Deposit Account No. 01-2340.

Respectfully submitted,

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Enclosure: Petition for Extension of Time